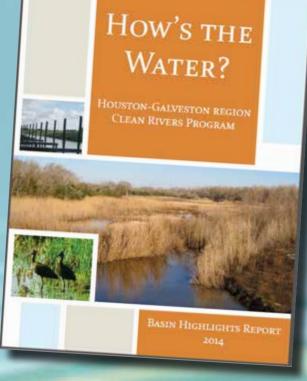


Protecting Lake Conroe's Water Quality

The San Jacinto River Authority (SJRA) has been monitoring the water quality in Lake Conroe since the lake was originally built in 1973. During that time, many things have changed, but one important thing has stayed the same – the water quality in Lake Conroe has remained very good.

The water quality report card for our region is contained in a document produced by the Houston-Galveston Area Council (HGAC) as part of its Clean Rivers Program (CRP). The document is called the 2014 Basin Highlights Report, and it can be found at www.h-gac.com. As you can see in Table 1 taken from the Report, Lake Conroe recently received a "five frog" rating. While the rating has a humorous note to it, the important thing to note is that Lake Conroe continues to receive strong reports year after year related to water quality conditions.

Table 1. In this summary table fromthe HGAC 2014 Basin Highlights Reports,blue boxes represent parameters that are"improving," brown boxes are "degrad-ing," and white boxes represent no sig-nificant change. The numbers in the tablerepresent the percent of total stream "seg-ment length" (or shoreline miles) that had



samples that were "of concern" for each parameter.

As mentioned above, while overall water quality has remained basically the same, a number of things have changed with regard to Lake Conroe's water qual-

Basin	Watershed	SEG_GRP	DO	Bact	Chlor	Nut	PCB	Other*	Frogs
Trinity-San acinto Coastal	Cedar Bayou	0001		100	100		100		*
	Cedar Bayou Above Tidal	0902					-		
San Jacinto River	Buffalo Bayou Above Tidal	3014	8.1	79-4		63.4		(
	Buffalo Bayou Tidal	1013	30.8	63.3		36.4		27.0	
	Caney Creek	1010	16.1	34.6					
	Cypress Creek	1009	41.0	84.6		84.6		10.4	eee
	East Fork San Jacinto River	1003		100					***
	Greens Bayou Above Tidal	1016	5.4	91.2		80.3			***
	Houston Ship Channel	1006	3.5	47-2	4.9	63.B	36.7	36.7	
	Houston Ship Channel Buffalo Bayou Tidal	1007	18.6	74.2		88.8	23.8	23.8	
	Houston Ship Channel/ San Jacinto River Tidal	1005				20.3	100		
	Lake Conroe	3012	4.9		35.4				
	Lake Creek	1015	66.3	48.3					
	Lake Houston	1002		6.6	141	413		0.1	****
	Peach Creek	1011		100					
	San Jacinto River Tidal	1001					43-4		
	Spring Creek	1008	37.6	71.7	11	22.3	2	11.7	
	West Fork San Jacinto River	1004	-	61.5		1.82			eee
	White Oak Bayou Above Tidal	1017	35	84.6		Bo.8			



ity, and those things relate to the strategies used for monitoring and protecting water quality.

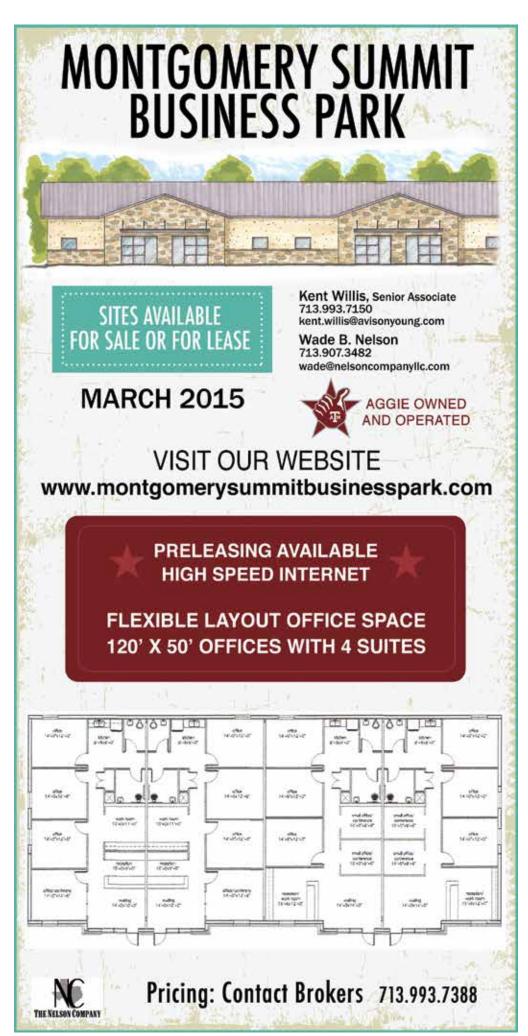
SJRA's early water quality monitoring program consisted primarily of a voluntary set of basic parameters that were tested on a monthly basis through a partnership between SJRA and the City of Houston. The primary parameters were dissolved oxygen, pH, temperature, hardness, ammonia, nitrogen, biochemical oxygen demand, suspended solids, iron, manganese, total organic carbon, sulphates, and total phosphorous.

Over the years, sampling technologies improved allowing for more accurate results and more cost-effective sampling programs. The list of parameters of interest also increased greatly.

In addition to the parameters listed above, the following is a PARTIAL list of the parameters that we currently test for: specific conductance, turbidity, alkalinity, color, UV-254 (related to organic carbon), total Kjeldahl nitrogen (related to organic nitrogen and ammonia that can promote algae growth), E. Coli, fecal coliform, metals (including silver, mercury, cadmium, nickel, arsenic, barium, lead, copper, etc.), pesticides, herbicides, Giardia, MIB and Geosmin (related to taste and odor), organic compounds, and volatiles.

In addition to an aggressive monitoring program, SJRA is also in the process of developing a formal watershed protection plan, which is a coordinated framework for implementing water quality protection and restoration strategies. The watershed protection plan is like a menu of options for protecting water quality with an associated cost-benefit analysis for each menu option. Working with a group of local stakeholders, including representatives from around Lake Conroe, SJRA is working to determine which menu options, or strategies, make sense for implementing here on Lake Conroe.

The first step in development of the watershed protection was "characterizing" the watershed, which identifies potential pollution sources. We have mapped the on-site sewage facilities (septic systems), sewage treatment plants, sewage lift stations, all major stormwater outfalls that dump into the lake, and much more. After reviewing the *Continued on page 34* \simeq





watershed characterization, the stakeholder group has spent many months learning about water quality protection strategies. Eventually, the stakeholder group will recommend certain strategies to be considered by SJRA's board of directors for implementation.

Almost certainly, one of the major strategies will be public education and outreach because many of our own personal behaviors can have a significant impact on water quality. Good examples include over-fertilization of our lawns and over-use of herbicides. Other strategies being considered include an improved program for ensuring proper septic system maintenance and enhanced requirements for storm water runoff from new developments.

Our goal is to have the watershed protection plan in place by June, 2015. You will be hearing more in the months to come. For more information on the watershed protection plan, please visit www.sjra.net. ◆







Inside the Forest Health Clinic (near Charming Charlie's) Cheryl Winter, FNP, RD, CDE ersing/Managing Diabetes & Obesity



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